

REMARKS

Claims 1 and 3-18 are pending in the above-identified application. Support for the substantive changes to claim 1 and 10 is found in original claim 2. Support for new claims 13-18 is found in original claims 5, 6, 9 and 11.

Removal of Issues under 35 USC 112

Claims 5, 6, 9 and 11 have been rejected under 35 USC 112, second paragraph, as allegedly being indefinite for reciting alternative ranges. Each of these claims has been amended in order to remove the alternative ranges, which is the basis for this rejection. Thus, it is requested that this rejection be withdrawn.

Issues under 35 USC 103(a)

All of the presently pending claims have been rejected under 35 USC 103(a) as being unpatentable over Rhee '149 (US 4,933,149) and Veariel '532 (US 6,838,532), with some of the claims being rejected over Yokoyama '879 (US 4,578,879) and/or Yamamoto '798 (EP 0 721 798). These rejections are traversed based on the following reasons.

Present Invention

In a conventional polymerization process the particles contained in the fluidized bed are reactive. The inventors have found that the growing polymer particles, especially those having a small particle size, tend to adhere to the surfaces, such as the reactor wall. They then continue to grow at the wall forming large agglomerates which subsequently fall into the fluidized bed causing process disturbances. For instance, the agglomerates may plug the outlet of the reactor. Traditionally this problem has been addressed by introducing antistatic agents into the reactor, which are suppose to eliminate the adhering tendency. The present inventors have found that by producing a gas stream sweeping at least 80% of the periphery of the wall and having a sufficient velocity it was possible to prevent these particles from adhering to the reactor wall. The

inventors then experimented with different ways to producing the gas flow and arrived at the presently claimed invention.

By employing the above-described features, the method and apparatus of the present invention advantageously suppress the formation of the agglomerates at the wall or near the distributor plate so as to provide for stable operation. This is evidenced by the description of the Example at pages 10-11 of the present specification.

Distinctions over Cited References

Rhee '149 discloses a fluidized bed reactor which includes a periphery flow 33a as shown in Figures 2-3 and discussed at columns 9-10. The reactor includes a distributor plate 28 as shown in Figure 4.

Rhee '149 fails to disclose or suggest a method or reactor structure which would allow for feeding a gas stream along at least 80% of the periphery of the inside reactor wall, as in the present invention. Note that the distributor plate of the reactor of Rhee '149 does not have sufficient opening to allow for this to occur. Consequently, significant patentable distinctions exist between the present invention and Rhee '149.

Similar to the above-noted distinctions, it is also apparent from the distributor plate 12 in Yokoyama '879 in Figure 1, as well as the distributor plate 2 in Figure 2 of Yamamoto '798, that these distributor plates can not allow for 80% of the gas stream to be fed along periphery of the inside of the reactor wall past the distributor plate. Thus, significant distinctions exist between the present invention and both the Yokoyama '879 and Yamamoto '798 references similar to those discussed above with regard to Rhee '149. In addition, Veariel '532 fails to disclose or suggest this same feature.

Consequently, the rejection based on all of the above-discussed references must be withdrawn.

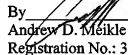
It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 
Andrew D. Meikle
Registration No.: 32,868
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant